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RETURN RECEIPT REQUESTED

February 3, 1994

John A. Oyler
Project Manager
Horsehead Resource Development Company, Incorporated
Field Station
Palmerton, Pennsylvania 18071

RE: Response to Comments dated October 29, 1993, Fire Investigation and Cut-Off Trench Location Investigation; Air Monitoring Program, Operable Unit #2, Cinder Bank, Palmerton Zinc Pile Superfund Site

Dear Mr. Oyler:

Thank you for your response to the comments of the U.S. Environmental Protection Agency (EPA) and those of the U.S. Army Corps of Engineers (USACE), Northeastern Resident Office, Tobyhanna, PA, Black & Veatch Waste Science and Technology Corporation, EPA's oversight contractor, and the Pennsylvania Department of Environmental Resources (PADER), prepared by your contractor for these projects, GAI Consultants, Inc. (GAI), on the above referenced submittals.

After due consideration, EPA has come to the following final conclusions regarding these submittals:

FIRE INVESTIGATION AND CUT-OFF TRENCH

* Additional work is required to delineate the Cinder bank fires and locate the cut-off trench.

EPA does not feel that either the fire location(s) or the potential site(s) for a cut-off trench, in relation to the fire, have been adequately delineated.

In concert with comments from USACE, EPA does not accept the conclusions reached regarding the extent and location of fires, and the placement of the cut-off trench that were based on borings which were, in some cases, 1,500 to 2,000 feet apart.

There is no information to back up the "safety of personnel" and "good engineering practice" assertions in GAI's responses to USACE Comment 1 and EPA Comment 11 and in EPA Comment 13, respectively to justify conceding the location of the cut-off trench so far distant from GAI's "center of fire activity."

In addition, the resultant borings locations appear to be in conflict with boring location strategy expressed in Section 3.3.3. Boring and Temperature Monitoring Program of the Work Plan For Additional Studies For Remedial Action At Cinder Bank Operable Unit at pages 3-20 and 3-21. An example would be borehole BH-13 in Figure 3. If borehole BH-4B was drilled approximately 500 feet (roughly) west of BH-13 in concert with that regimen, additional drilling should have been done east of BH-13 as well. The wording "east and/or west" (line 6, page 3-21) should not be interpreted as allowing investigators the apparent option to pursue the extent of a potential fire in only one direction.

Further, EPA does not accept GAI's response to EPA Comment 12, with regard to the "philosophy" of the fire/cut-off trench investigation. The investigation was to establish where the fire is, as well as where it is not, with respect to possible trench locations, presumably to put the trench as close to the fire as prudently possible to stop the fire's progress, not just where it might be more convenient to put it.

Miscellaneous items add to our discomfiture with certain of the responses to our (EPA, et al) comments. For example, in GAI's response to EPA Comment 1, concerning their thermal infrared overflight in June, why weren't they scheduled for the winter months to maximize contrasts in ground temperature? Also, discussion on page 49 of another document submitted to EPA by HRD for review, Project Screening Report, Deliverable No. 1, Task 5, Feasibility of Recycling the Cinder Bank, Dames & Moore #20266-006-019, dated July 23, 1993, appears to postulate the existence of and subsidence associated with a former anthracite coal mine beneath the Cinder Bank. GAI's response to BVWST Comment 4 states unequivocally that "The Cinder Bank is not underlain by abandoned mine workings." Likewise in GAI's response to USACE Comment 5. Which is it?

Additional work, both to more closely determine where the fires are and where to put the cut-off trench with the objective of stopping the fire, conceding no more of the cinder bank than safety and engineering would dictate. While a myriad of engineering considerations undoubtedly exist for both portions of this project and safety should always be a prime consideration, more and better information than appears in this report is required before EPA can accept this project as complete.

AIR INVESTIGATION

* Monitoring for benzene, hydrogen sulfide (H_2S) and sulfur dioxide (SO_2) should be repeated.

The need for repeat monitoring for benzene to eliminate the potential introduction of other sources (e.g. gasoline as expressed in EPA Comment 8), and for several other reasons expressed elsewhere by other commenters has been conceded.

The lowest detection limits that the monitors could reach for hydrogen sulfide (H_2S) and sulfur dioxide (SO_2) were 1.0 ppm and 0.1 ppm respectively as listed in Response A to EPA Comment 3. This detection limit was woefully inadequate for sulfur dioxide and hydrogen sulfide, whose ARARs and Risk-based limits are listed below. If the detection limits cannot be met by these particular instruments, then different monitors should be used during the repeat effort.

ARARs and Risk-Based Standards

Contaminant	$\mu g/m^3$	ppm
Sulfur Dioxide	80	0.03
Hydrogen Sulfide	0.94	0.0007

These submittals are herewith disapproved until the aforementioned portions of the respective investigations are performed satisfactorily. EPA expects to receive your detailed work plan(s) to perform these repeat investigations by **COB March 3, 1994.**

Regarding the inconclusive thermal infrared overflight of the Cinder Bank area, EPA will accept for expedited review a separate, partial work plan describing that activity only. This is being offered to allow you the opportunity to complete this aspect of the study during the remaining cold weather months, if you so desire.

Please feel free to contact me if you have any questions.

Sincerely,

Frederick N. Mac Millan
Remedial Project Manager

cc: F. Burns
T. Koller
C. Nadolski
P. Flores
J. Moore, USACE
J. D'Onofrio, PADER
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